

CLAIMS

1. A device for forming a thermally sprayed film on an inner face of a bore of a cylinder block, comprising:

a thermal spraying gun to be inserted into the bore from an opening at one end of the bore; and

a means for generating a spiraling vapor current that spirals around an axis of the bore and proceeds toward an opening at the other end of the bore.

2. A device as set forth in Claim 1, wherein the spiraling vapor current has a velocity component toward a center of the bore.

3. A device as set forth in Claim 1, wherein the means for generating a spiraling vapor current comprises a pair of sucking pipes that are arranged in parallel to each other and the axis of the bore intervenes between the axes of sucking pipes.

4. A device as set forth in Claim 1, wherein the means for generating a spiraling vapor current has a device for sucking vapor from an intake port and an exhaust port that are installed within a cylinder head unified with the cylinder block.

5. A method for forming a thermally sprayed film on an inner face of a bore of a cylinder block, comprising:

a step of generating a spiraling vapor current that spirals around an axis of the bore and proceeds toward an opening of the bore; and

a step of spraying molten metal particles from a thermal spraying gun inserted into the bore towards the inner face of the bore with the spiraling vapor current generated in the bore.

6. A method as set forth in Claim 5, wherein the spiraling vapor current generates a velocity component toward a center of the bore.

7. A method as set forth in Claim 6, wherein the flow of vapor toward the center of the bore prevents oxidized metal particles from adhering to the inner face of the bore.